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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,406	08/17/2001	Edward Boling	03424.P018	4310
8791	7590	03/17/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			SMOOT, STEPHEN W	
			ART UNIT	PAPER NUMBER
			2813	

DATE MAILED: 03/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,406

Applicant(s)

BOLING ET AL.

Examiner

Stephen W. Smoot

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-24 is/are pending in the application.
- 4a) Of the above claim(s) 12-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 and 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office action is in response to applicant's amendment received on 28 December 2004.

Election/Restrictions

1. Claims 12-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply received on 28 December 2004.

Drawings

2. Replacement drawing sheets corresponding to Figs. 2, 9, 12D-12F, 17-19, 27A-27G were received on 28 December 2004. These drawings are acceptable.

Claim Objections

3. Claim 6 is objected to because of the following informality:

In claim 6, line 2, change "the the first substrate" to --the first substrate-- to correct grammar.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 6-7, 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Haas (US 6,111,555).

Referring to Figs. 1-3 and column 4, line 32 to column 8, line 45, Haas discloses a plasma display panel with the following features:

- A back glass substrate (24) with an inner surface (36) that includes gas discharge troughs (38) and barrier ribs (40);
- Elongated back electrodes (42) (i.e. rods) formed within the gas discharge troughs (38);

- A front glass substrate (22) with an inner surface (28) that includes elongated front electrodes (30);
- The back electrodes (42) and front electrodes (30) extend in transverse directions from each other and their intersections define pixels (46);
- The front glass substrate (22) includes an electrical driver formed on an integrated circuit chip (60); and
- The plasma display panel has a uniform voltage applied to the entire panel during sustain periods and has selective address voltages for driving individual pixels during address periods (also see column 1, lines 16-51).

These are all of the structural limitations set forth in claims 1, 3, 6-7, 10-11 of the applicant's invention. It is noted that claims 1, 3, 6, 11 have product-by process limitations, regarding the formation of features on a first substrate, that do not appear to be distinguishable from the above structure disclosed by Haas (see MPEP section 2113 regarding the examination of product-by-process claims).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 1-2, 6-7, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choi et al. (US 6,005,345) in view of Haas (US 6,111,555).

Referring to Figs. 2F, 3 and column 2, line 66 to column 4, line 20, Choi et al. disclose a plasma display panel with the following features:

- A bottom transparent substrate (10') with striped grooves to form barrier ribs that define pixels of the plasma display (also see column 1, lines 12-26);
- Vertical transparent electrodes (12) (i.e. rods) formed in each of the striped grooves;
- Striped horizontal electrodes (15) with supports (17) (i.e. spacers) formed over the bottom substrate (10'); and
- A top transparent substrate (not shown) formed over the bottom substrate (10').

These are structural limitations set forth in claims 1-2, 6-7, 10-11 of the applicant's invention. It is noted that claims 1-2, 6, 11 have product-by process limitations, regarding the formation of features on a first substrate, that do not appear to be distinguishable from the above structure disclosed by Choi et al. (see MPEP section 2113 regarding the examination of product-by-process claims).

However, Choi et al. do not expressly teach or suggest the first voltage driver limitation as set forth in claim 1 of the applicant's invention.

Haas teaches that plasma display panels have a uniform voltage applied to the entire panel during sustain periods and have selective address voltages for driving individual pixels during address periods (see column 1, lines 16-51).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings Choi et al. and Haas in order to include a voltage driver as taught by Haas. Haas recognizes that a voltage driver is used in plasma display panels for illuminating selected pixels (see column 1, lines 35-43).

8. Claims 1-2, 6, 8, 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malhi (US 5,818,165) in view of Watkins et al. (US 6,133,689).

Referring to Figs. 1-4 and column 2, line 10 to column 6, line 14, Malhi discloses a flexible field emission device (FED) with the following features:

- A cathode element (14) that includes gate electrode layer (36);
- Microtips (52) (i.e. emitters) formed within cavities (54) formed through the gate electrode layer (36);
- The microtips (52) are arranged in an array of clusters (38) that define a plurality of image pixels (57) as shown in Figs. 3, 4; and
- A flexible frit (50) (i.e. spacers) separates the cathode element (14) from an overlying anode element (12).

These are structural limitations set forth in claims 1-2, 6, 8, 10-11 of the applicant's invention. It is noted that claims 1-2, 6, 11 have product-by process limitations, regarding the formation of features on a first substrate, that do not appear to be distinguishable from the above structure disclosed by Malhi (see MPEP section 2113 regarding the examination of product-by-process claims).

However, Malhi does not expressly teach or suggest the first voltage driver limitation as set forth in claim 1 of the applicant's invention.

Watkins et al. teach that field emission displays in operation use a field emission display driver to respond to control signals by outputting a cathode voltage, a source voltage, and an anode voltage (see column 4, lines 8-24).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings Malhi and Watkins et al. in order to include a field emission display driver as taught by Watkins et al. Watkins et al. recognize that a field emission display driver is used to operate the field emitters in order to emit light for illuminating the display (see column 4, lines 20-24).

9. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malhi (US 5,818,165) and Watkins et al. (US 6,133,689) as applied to claim 1 above, and further in view of Shanks et al. (US 5,821,688).

As shown above the combination of Malhi and Watkins et al. has all of the limitations set forth in claim 1 of the applicant's invention. However, this combination does not expressly teach or suggest attaching the flexible field emission device of Malhi to either a planar object (the further limitation to claim 1 set forth in claim 4) or to a non-planar object (the further limitation to claim 1 set forth in claim 5). Shanks et al. teach the attachment of a flexible display panel to a flat display or to a curved display (see Fig. 4 and column 5, lines 37-43).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings Malhi, Watkins et al., and Shanks et al. in order to form either flat or curved displays as taught by Shanks et al. Shanks et al. recognize that a flexible display panel will conform to the shape of a variety of surfaces (see column 5, lines 40-43).

Response to Arguments

10. Applicant's arguments received 28 December 2004 (see pages 13-16) have been fully considered but they are not persuasive.

The applicant argues that the applied references lack "an array of display drivers, each formed from a first substrate and deposited and recessed onto a second substrate", which is a limitation of claim 1. However, the "formed from a first substrate" and "deposited" steps are product-by-process limitations and, as indicated above, the structure implied by these process steps is not distinguishable from the prior art structures of Haas taken alone, Choi et al. combined with Haas, Malhi combined with Watkins et al., and Malhi combined with Watkins et al. when further combined with Shanks et al. Accordingly, *prima facie* cases of anticipation and obviousness have been established and the burden shifts to the applicant to show that their as-claimed structure is different from these prior art structures (see MPEP section 2113).

The applicant more specifically argues that the applied prior art references lack recessed regions. However, as indicated above, Haas discloses back electrodes (42)

formed within discharge troughs (38), Choi et al. disclose transparent electrodes (12) formed in grooves, and Malhi discloses microtips (52) formed within cavities (54).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which applicant relies (i.e., display drivers formed on blocks – see page 15) is not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen W. Smoot whose telephone number is 571-272-1698. The examiner can normally be reached on M-F (8:00 am to 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SWS

Stephen W. Smoot
Patent Examiner
Art Unit 2813